

ORGANIZATION FOR THE PROTECTION AND ADVANCEMENT OF SMALL TELEPHONE COMPANIES

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FEDERAL COMMUNICATIONS COMMISSION OFFICE OF SECRETARY

Re:

CC Docket No. 80-286

CC Docket No. 95-115 \checkmark

Dear Mr. Caton:

Mr. William F. Caton

1919 M Street, NW

Washington, DC 20554

Federal Communications Commission

Secretary

Room 222

On September 18, 1995, representatives of the Organization for the Protection and Advancement of Small Telephone Companies (OPASTCO) met with Commissioner Barrett, Todd Silbergeld, Commissioner Susan Ness, James Casserly, Commissioner James Quello, and Lauren Belvin. Those individuals present were Allen Arvig (East Otter Tail Telephone Company), Ed Dailor (Empire Telephone Corporation), Ed Eichler (Pigeon Telephone Company), John Rose (OPASTCO), and Ken Johnson (OPASTCO).

OPASTCO presented two articles from its continuing study on Universal Service, titled "Keeping Rural America Connected: Costs and Rates in the Competitive Era." The first article, "How Public Policy Has Created and Preserved Universal Service," outlines the increased subscribership and improved networks brought about by universal service mechanisms. The second article, "The Dynamics of Serving Rural America," describes the characteristics and costs of providing telecommunications service to rural areas.

This ex parte notice was filed with the Secretary of the Commission on September 19, 1995.

John N. Rose

Executive Vice President

Respectfully submitted,

cc:

Commissioner Barrett Commissioner Ness Commissioner Quello Todd Silbergeld James Casserly Lauren Belvin



Keeping Rural America Connected:

How Public Policy Has Created and Preserved Universal Service

JILL O'ROURKE

Today, approximately 1,300 independent telephone companies serve small towns and rural America. They provide quality, state-of-the-art service using the most modern technology. Fiber optic cable and digital switching are common among almost all independents.

But while evolving technology has played a major role in building the nation's telecommunications infrastructure, public policies and major historical events also have helped shape the development of telecommunications, particularly in rural areas. Without these events at critical times during the industry's 100-year-plus history, many rural areas would not have modern communications; perhaps some would not have telephone service at all.

As public policy has served both the telecommunications industry and the American consumer well, it is imperative that adequate policies be maintained and adopted that lead the industry into the next century and, more importantly, continue to ensure that all Americans—including those in rural America—have access to quality telephone service at reasonable rates.

What follows is a review of key telecommunications policy issues and events which have helped create today's public switched network and worked to ensure rural telephone companies—and their subscribers—a place in that network.

Bell Patents Expire, Allowing Independents to Serve Rural Areas

In 1876, Alexander Graham Bell received patent No. 174,465 for the telephone. Seventeen years later, those patents expired, opening the market for competition, and the independent telephone industry began.

While a few independents had formed earlier, the expiration of the Bell patents marked the true start of independent telephony. What resulted was the creation of more than 6,000 independent telephone companies that provided telephone service to rural areas and small towns that the Bell System did not find profitable to serve. The independents were devoted to protecting the rights of non-Bell companies and their customers, as well as working to position themselves as successful competitors.

This is the first in a series of articles expanding upon OPASTCO's landmark study, Keeping Rural America Connected: Costs and Rates in the Competitive Era.

The Kingsbury Commitment: The Beginning of Interconnection

In the late 1890s, although independents wanted to connect to the toll lines of the Bell System, the Bell System did not permit such connections, and rural customers suffered by not being able to call other communities.

But in late 1913, Bell-independent toll interconnection was achieved due to the Kingsbury Commitment. Facing the threat of antitrust actions, AT&T Vice President N.C. Kingsbury wrote a letter to the U.S. Attorney General. According to the document, the Bell System would allow independents to connect with its toll lines and, for these connections, independents' customers would pay the regular toll charge of the Bell company in addition to a connection charge of 10 cents for each call originating on an independent's lines and carried in whole or in part over Bell System lines.

The First Settlements Plan—Board-to-Board

With interconnection attained, compensation to the independents or some form of revenue sharing between the independents and Bell companies became an important issue. Initially, there were no Bell-independent settlements, but gradually, the industry established plans to compensate independents for the portion of the network they provided for jointly handled business.

Toll settlements are crucial to independents—today more than 50 percent of the independent industry's total revenues are derived from toll settlements. Settlements are critical and very much needed if independents are to build and upgrade their networks.

The first settlements plan, which dominated the industry through 1930, was called board-to-board. According to this concept, local exchange rates covered the provision of subscriber station equipment, local distribution plant, and local exchange switching equipment. Therefore, toll rates and the definition of toll costs included only compensation for the use of the toll switching equipment and interexchange facilities; none of the toll revenue went toward the cost of local distribution plant.

Board-to-board settlements proved terribly inadequate for rural independents; they received virtually no compensation for originating or terminating toll calls. But in 1930, the Supreme Court decision in Smith et al. Constituting the Illinois Commerce Commission et al. v. Illinois Bell Telephone Company in effect put an end to the board-to-board plan.

The Supreme Court Decision—Smith v. Illinois Bell Telephone Company

This 1930 Supreme Court ruling mandated the principle of station-to-station settlements. The court determined that the cost of toll service included, as a component, the cost of the station equipment and local distribution plant. In its decision, the court rejected the "practical difficulty of dividing the property between inter- and intrastate...and point[ed] to the indisputable fact that the subscriber's station equipment and other facilities of a company are used in connecting with the long distance switchboard..."

Illinois Bell stressed the difficulty of separating exchange properties, but according to the court, "While the difficulty in making an exact apportionment of the property is apparent, and extreme nicety is not required, only reasonable measures being essential, it is quite another matter to ignore altogether the actual uses to which the property is put."

Basically, the court ruled in favor of the station-to-station principle, saying that local facilities are used for making a toll call and therefore, a por-

tion of the local exchange investment must be acknowledged as a portion of the cost of providing toll service. The impact of the court's ruling was positive for independents, as it directed more revenues to them, which in turn allowed them to continue to build and upgrade their exchange facilities.

But while the court based its decision on the station-to-station concept, the Bell System continued to follow the board-to-board concept. It was not until 1950 that the Bell System refiled its intrastate tariffs to reflect toll service costs on a station-to-station basis.

Establishing the Communications Act of 1934—and the Universal Service Concept

Historically, one of the cornerstones of U.S. telecommunications policy has been the pursuit of the goal of universal service. The Communications Act of 1934 defined the concept of universal service as making "available, so far as possible, to all the people of the United States a rapid, efficient, nationwide and worldwide wire and radio communication service with adequate facilities at reasonable charges..." Included in that definition is the concept that everyone should have a telephone.

The goal of that public policy was—and remains today—to guarantee that all subscribers, both urban and rural, are entitled to quality telephone service at reasonable rates.

In addition to establishing universal service goals, the Communications Act created the Federal Communications Commission (FCC). Prior to the 1930s, the telephone industry remained largely unregulated for interstate services. State regulators were not too interested in the separations issue (the apportionment of revenues, investment, and expenses between the interand intrastate jurisdictions) until 1934 when Congress passed the Communications Act, established the FCC, and gave the agency authority over the interstate communications industry. With this authority, the FCC began efforts to negotiate interstate message toll rates with state regulators.

FCC and State Regulators Negotiate Settlements

Between 1935 and 1940, the FCC, state regulators, and the Bell System negotiated major reductions in interstate message toll rates, and what resulted were major intrastate toll and exchange rate increases. Historically, the problem of intrastate toll rates being relatively higher than interstate toll rates has been termed "toll rate disparity."

With this jurisdictional disparity in toll rate levels and revenues, state regulators became increasingly interested in changing cost allocation methods and began supporting interstate settlements that would allow them to lower intrastate rates and reduce toll rate disparity. But the FCC resisted, saying what state regulators were proposing was inconsistent with *Smith v. Illinois Bell.*

Throughout the 1940s, the FCC and the National Association of Regulatory Utility Commissioners (NARUC) revised the separations procedures. In 1947, an FCC-NARUC committee rewrote the separations procedures based on the station-to-station concept. The rewrite was good for independents who, under the new plan, would receive more revenues and be in a better position to continue to improve their networks and serve rural subscribers.

From this point on, the FCC said a NARUC-FCC Separations Manual would be the official way to revise separations procedures. The manual would be revised several times but without an official version adopted until 1971.

Congress Creates the Rural Electrification Administration

During the Depression in the 1930s, telephone service in rural areas suffered. Also, independents accomplished very little network upgrading in rural areas during World War II. But the war helped the nation's economy by providing new industry and jobs, and it also brought an increased demand for telephone service—and many rural areas still did not have any telephone service at all. Thus,

telephone companies, both large and small, needed money to finance improvements in service. Financing often was difficult to obtain, particularly for a company serving a rural area.

To provide quality telephone service in all rural areas at reasonable rates, Congress, in 1949, amended the Rural Electrification Act and authorized the Rural Electrification Administration (REA) to provide loans to both existing small telephone companies and new telephone entities.

The REA, known today as the Rural Utilities Service (RUS), is a Department of Agriculture agency which makes long-term loans to rural telephone companies and cooperatives, assisting them in maintaining and expanding telephone service to customers living in even the most remote rural areas.

According to the RUS, when the telephone loan program began in 1949, only 60 percent of rural households had basic telephone service (and just more than 30 percent of farms (see Figure 1)).

Today, due primarily to universal service mechanisms, that figure is 94 percent. REA/RUS has been the government's main vehicle for implementing universal service. Its financing has provided telephone service to nearly six million subscribers, and it has helped build the rural telephone infrastructure which has fostered rural development for nearly 50 years. Figures 1 and 2 both show the dramatic increase in total subscribers, while Figure 2 also shows the conversion to one-party service.

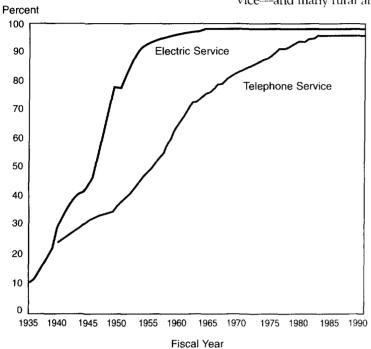
Since the introduction of digital switching equipment in 1977, REA/RUS has been financing the conversion from analog to digital switching. Today, RUS-financed telephone companies have 93 percent of their access lines served by digital switches. REA/RUS loans also have enabled rural telephone companies to install fiber optic cabling; offer enhanced services and features such as integrated services digital network (ISDN), signaling system 7 (SS7), and custom local area signaling services (CLASS); and provide technologically advanced applications such as distance learning.

Twenty Years of Experimenting with Separations

Throughout the 1950s and 1960s, further changes to settlements plans assisted independents and their customers. These changes yielded more revenues which independents used to improve service. Revisions to the *Separations Manual* generally were named after the location of the NARUC convention during which they were announced. Two of the major separations changes were the Charleston Plan in 1951 and the Denver Plan in 1965.

Essentially, these two plans shifted more and more annual revenue requirements into the interstate jurisdiction. Between the early 1940s and the advent of the Denver Plan in 1965, changes to separations methods brought a transfer of revenue requirements from the intrastate to the interstate jurisdic-

Figure 1: Percent of Farms with Electric and Telephone Service (U.S. Totals)



Source: A Brief History of the Rural Electric and Telephone Programs USDA/REA, January 1991

tion of approximately \$280 million; with the adoption of the Ozark Plan in 1971, this number increased.

Implementing the Ozark Plan: A Major Boost to Quality Service in Rural America

Instituted in 1971, the Ozark Plan allocated a significantly greater portion of the costs of local plant to interstate service. The Ozark Plan also marked the first time the FCC officially adopted the Separations Manual.

The plan introduced the concept of subscriber plant factor (SPF) which allocated local distribution plant and a portion of switching costs between the inter- and intrastate jurisdictions. The plan's revised procedures provided that 1) subscriber plant costs be assigned to interstate operations based on a new two-part formula which assigned proportionately less costs to short-haul traffic and more costs to long-haul traffic; and 2) local dial switch-

ing equipment be segregated between non-traffic-sensitive (NTS) and traffic-sensitive equipment, with the costs of NTS equipment apportioned by the application of SPF, and the costs of traffic-sensitive equipment apportioned based on the relative dial equipment minutes of use.

The result of this separations plan for the industry was increased costs allocated to the interstate jurisdiction which reduced the local revenue requirement that had to be recovered through local rates. The impact for independent telephone companies and their rural customers was tremendous—with this increase in revenues, they could undertake major upgrades in their rural service areas.

In addition, the Ozark Plan changed the settlements procedures, in that independents now had the option to settle on a cost basis or an average schedule basis.

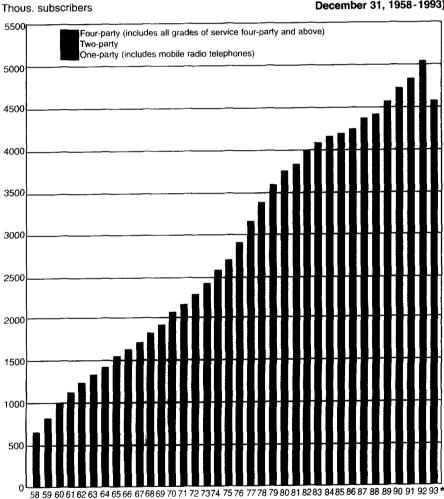
Congress Creates the Rural Telephone Bank

During the late 1960s and early 1970s, rural telephone companies' capital needs were growing fast. To meet these increasing capital needs, Congress made yet another important policy decision for rural telephony in 1971 by

establishing the Rural Telephone Bank (RTB), a supplemental financing source for rural independents.

Congress determined that through the use of REA staff, the RTB would make loans and have a board of directors composed of government officials and elected industry representatives. The 1971 legislation anticipated the RTB eventually would become a private bank.

Figure 2: Number of Residential Subscribers by Grade (Borrowers as of December 31, 1958-1993)



Year

* The chart depicts a drop in the total number of residential subscribers for REA borrowers from 1992 to 1993. This is because there was a drop in the number of REA borrowers (market interest rates were low and many paid off their REA loans); the number of subscribers per borrower actually continued to increase.

Source: 1993 Statistical Report-Rural Telephone Borrowers, USDA/REA, 1993

Figure 3: FCC Accounting, Separations, and Access Basics

Local exchange carriers (LECs) provide both inter- and intrestate electromagnitudes are extract. The intertate carriers are extract to the junction of the FCC. The major portion of LECs' telephone property is used for both inter- and introduce services; the major portion of the operating expenses is incurred in the juict rendering of these services. Consequently, appropriate memory of expending trace goods interests the interest interests interest interests in the interest in the interest interests in the interest in the inter

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Divestiture and the Creation of the National Exchange Carrier Association

The 1980s brought a time of dramatic transition in U.S. telecommunications policies and events. In 1984, the U.S. District Court ordered the divestiture of AT&T, separating its long distance operations from the local telephone operations (Bell System). Gradual deregulation and restructuring of the long distance telecommunications market began. Divesture and other events throughout the decade had a profound impact on rural telephony.

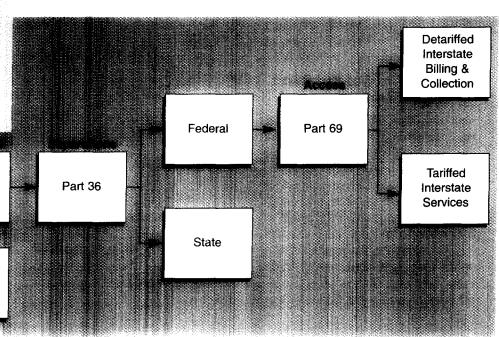
Before divestiture, AT&T and the independent telephone companies were partners to ensure universal service. AT&T Long Lines controlled the interstate network, and the local companies—Bell and independent—controlled the intrastate and local networks. AT&T's process of dividing revenues determined an interstate payment amount for each Bell local operating company, and the Bell company paid the independents operating in its service area. This was the division of revenues process.

In 1984, as a result of the divestiture consent decree, AT&T divested the Bell operating companies. Anticipating this event, the FCC knew it needed to form an organization to replace AT&T as the administrator of the division of revenues process. As a result, the National Exchange Carrier Association (NECA) was formed in 1983.

NECA acts as a fund administrator, distributing the revenues collected from long distance telephone calls that are allocated to cover the costs of the local switching and local distribution plant, now called access lines, associated with long distance calls.

After divestiture, NECA began operating as follows: every long distance call made involves two local exchanges and access lines connecting the calling and the called parties to those exchanges, as well as the long distance lines and switches in between. Long distance companies must pay a portion of the revenue they receive from each long distance call to each of the local carriers involved to cover the local costs at each end. The revenues and the related costs are then pooled, rather than each call being accounted for separately. NECA administers the pools of costs and revenues and allocates the funds among the carriers according to FCC regulations.

Today, NECA operates in essentially the same manner except that it no longer performs these functions for the large local exchange carriers (LECs).



Implementation of Access Brings Major Changes

In the 1980s, the FCC developed and implemented the concept of access—the ability to enter or connect to the telecommunications network—which spurred many changes in the division of revenues process.

In the interstate market, the FCC establishes rules governing access charges. A LEC's customers, both telephone subscribers and interexchange carriers (IXCs), pay the LEC an access charge for connecting to the LEC's network. The subscribers pay for their access through a monthly subscriber line charge (SLC), set at a maximum of \$3.50 for residential and single-line business subscribers and \$6 for multiline business subscribers, while the IXCs pay usage-based charges.

IXCs pay access charges for their use of the LEC network to deliver calls to and from subscribers. Interstate access tariffs include both traffic-sensitive (TS) charges and carrier common line (CCL) charges. The CCL charge covers a portion of the LEC's fixed or NTS costs of providing access, while the TS charge covers costs that vary based on the amount of traffic.

Support Mechanisms Maintain Universal Service

With divestiture and the implementation of access, new support mechanisms were needed to replace the components of the Ozark Plan. Among these support mechanisms are the Universal Service Fund (USF), dial equipment minutes (DEM) weighting, and the Link-up America and Lifeline programs. Although large companies receive money from both USF and DEM weighting, these mechanisms, as well as the continued policy of geographic rate averaging, specifically benefit rural independents and their customers.

The Universal Service Fund Promotes Universal Service in Rural Areas

Established by the FCC, the USF was created to reduce the impact of divestiture on high-cost LECs. It aimed to encourage universal service by allowing LECs that serve high-cost areas to keep their local rates affordable.

To accomplish this, the USF permits high-cost LECs to recover additional revenue from the interstate jurisdiction. Essentially, the USF program transfers revenue requirements from the intrastate to the interstate jurisdiction to allow companies to decrease their intrastate rates.

The USF is funded by contributions from IXCs. Initially, the allocations were based on each IXC's nationwide minutes of use. In 1989, this changed to an allocation based on a flat monthly per-line fee based on each IXC's number of presubscribed lines.

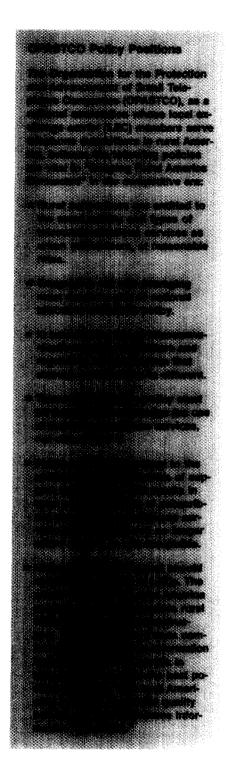
The USF is administered by NECA. NECA files tariffs at the FCC for the access charges IXCs pay to the local carriers, bills the IXCs for the charges, and distributes the funds to qualifying LECs on a monthly basis.

DEM Weighting Keeps Rural Switching State-of-the-Art

Under the FCC's current separations rules, central office switching investment is assigned to two groups: intertoll switching and local switching. The allocation of local switching investment between the inter- and intrastate jurisdictions is determined by the use of DEM weighting.

DEM is a usage-based component that is weighted to recognize that the cost per dial equipment minute is higher in smaller central offices than it is in larger central offices and that toll usage requires more equipment than local usage. LECs with fewer than 50,000 access lines apply a weighting factor to their interstate DEM which increases the interstate DEM and results in





more local switching investment being allocated to the interstate jurisdiction.

According to the commission's rules, the amount of local switching investment allocated to the interstate jurisdiction through the use of interstate DEM is limited to 85 percent of a LEC's total switching investment. Through DEM weighting, the FCC has encouraged the deployment of digital switching and digital networks in rural America.

Link-up America and Lifeline Programs Keep Customers On Line

Link-up America and Lifeline are crucial support programs for rural LECs and their subscribers. Link-up America is a program through which qualified subscribers can obtain a reduced telephone service installation charge and pay for that charge over time. States must have their Link-up programs approved by the FCC.

Lifeline is a program through which qualified subscribers can have their \$3.50 monthly SLC reduced via a LEC plan to reduce local rates or via an FCC-approved state SLC assistance program.

Geographic Rate Averaging Benefits Rural Customers

Rural America currently benefits from the policy of geographic rate averaging for both interstate and intrastate toll rates. The costs of carrying calls to high-cost, low-volume areas are averaged with the costs of carrying calls to high-volume areas; thus carriers charge uniform rates for carrying toll calls to all locations.

The costs of carrying a call to some areas are much higher because there is less telephone traffic going to that area. If rates were deaveraged, a call would cost more on a low-volume rural route than would a call of equal distance on a high-volume urban route. As a result, rural customers would suffer from much higher rates.

The policy of geographic rate averaging has served rural America well. It is essential that any new national policy preserve this concept to ensure all Americans access to toll services at reasonable prices.

Future Changes to Public Policy Should Continue to Support Universal Service

Decisive public policies and key events in telecommunications dating back to the early 1900s, have recognized the importance of telephone service in rural areas. These policies and events have played an integral role in building today's advanced, state-of-the-art telecommunications infrastructure. Further, they have ensured rural telephony a place in that infrastructure.

It is essential that any new telecommunications legislation or FCC decision continue to support universal service at reasonable rates for all Americans—including those in rural America—so they are guaranteed access to quality telephone service at reasonable prices. We must not lose what has taken more than 100 years to accomplish. ${\mathfrak C}$

Jill O'Rourke is assistant editor of the OPASTCO Roundtable and Public Relations Coordinator for OPASTCO.